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# LECTURE,

#### INTRODUCTORY TO A COURSE,

ON

# SURGERY,

IN THE

## UNIVERSITY OF PENNSYLVANIA,

CONTAINING

A SHORT ACCOUNT OF EMINENT BRITISH SURGEONS, PHYSICIANS, SCIENTIFIC AND LITERARY MEN;

DELIVERED OCTOBER 22, 1847.

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### INTRODUCTORY LECTURE.

GENTLEMEN,

Rogers, in his celebrated poem, Italy, has remarked, "ours is a nation of travelers; and no wonder when the elements, air, water, fire, attend at our bidding to transport us from shore to shore; when the ship rushes into the deep, her track the foam, as of some mighty torrent; and, in a short time we stand gazing and gazed at among a foreign people. None want an excuse. If rich, they go to enjoy; if sick, to recover; if studious, to learn; if learned, to relax from their studies. But, whatever they may say, whatever they may believe, they go, for the most part, on the same errand; nor will those who reflect, think that errand an idle one. Now travel, and foreign travel more particularly, restores to us in a great degree what we have lost. When the anchor is heaved, we double down the leaf, and, for a while, at least, all effort is over. The old cares are left clustering round the old objects; and at every step, as we proceed, the slightest circumstance amuses and interests. All is new and strange. We surrender ourselves and feel once again as children. In traveling, we multiply events, and innocently; we set out, as it were, on our adventures; and many are those that occur to us, morning, noon, and night. How delightfully, too, does the knowledge flow in upon us, and how fast. Would he who sat in a corner of his library, poring over books and maps, learn more, or so much in the time, as he who, with eyes and his heart open, is receiving impressions all day long from the things themselves? Like a river that gathers, that refines as it runs, like a spring that takes its course through some rich vein of mineral, we improve and imperceptibly; not in the head only, but in the heart. Our prejudices leave us one by one. Seas and mountains are no longer our boundaries. learn to love, esteem, and admire beyond them. Our benevolence extends itself with our knowledge. And must we not return better citizens than we went? For the more we become acquainted with the institutions of other countries, the more highly must we value our own."

I had long entertained similar opinions. Some of my earliest impressions had been derived from Europe. There my medical education had, as it were, commenced and terminated. Many of the friends of my youth were still there. To see and hold converse with them; to repeat a visit I had made some eight years since, from which I had derived so much pleasure and so many advantages; to see other parts of Europe I had not seen before; to benefit my own health, naturally robust, but which had suffered more or less from the wear and tear of arduous professional duties and anxieties, from which no man can entirely escape in any country; but above all, from an ardent wish to promote your interests, by culling for you, from every medical plant and flower, the choicest fruits and sweets, and presenting them to you in what I trust will prove an acceptable form ;-have I commenced and finished the tour of which I propose to furnish, in one or more discourses, a full account, trusting that every allowance will be made for this first, at least, when I inform you that it has been put together within the last twelve days, amidst the distracting din and jar of steam-engines, the tumult and boisterous mirth of a crowd of men, women and children, or the depressing inquietude of a host of others, suffering under the most horrible of all innocent maladies, sea-sickness, during a stormy passage of three thousand miles across the Atlantic. This much, at least, I may say in anticipation, that my whole tour has proved a most agreeable and instructive one; that, during my sojourn in England, in France, in Belgium, in Germany, and in Holland, I have devoted myself almost exclusively to medical concerns, have almost lived in hospitals, in medical schools, in museums, in the work-shops of instrument-makers, in the society of the first physicians, surgeons, professors, lecturers, and scientific men the world contains; that from most of these I have received the kindest and most unwearied attentions; that many of them presented me with their most valuable books, or put me in the way of obtaining the choicest preparations and instruments suitable for class demonstrations, all which are at this moment either in my possession, or safely arrived at other ports, and at my immediate disposal; that, upon the whole, I may state I have seen a vast deal during the last few months, gained a vast deal, recovered my health and strength entirely, feel like a new man, or rather as light and corky as a boy, am ready to enter heart and soul upon my lectures, to teach you all I know, to show and explain to you all I have procured at great labor and expense—and yet that one difficulty remains, and this not easily overcome. I cannot give you, for example, in a single lecture, the tenth part of all I have seen; I cannot inform you, in the same space, of all you wish to know; I cannot tell you how to proceed, when you go to Europe

yourselves, as many of you will, and ought, after you have completed your education here; I cannot advise you what lectures to attend, what teachers and schools to select, what cities to prefer, what dangers and risks and impositions to avoid-all which, if properly told, and in sufficient detail, will save you much time, expense, labor, and thought. There is only one way, it occurs to me, in which I can do all thisto give you, during the winter, on stated days, and at some unoccupied hour, a continuation of the present introductory. This plan, I am aware, will impose upon me an arduous duty, engaged as I shall be with lectures and professional avocations; but, nevertheless, I am willing to undertake it, under the conviction that it cannot fail to be useful to you, and in the end agreeable to myself and to those friends abroad, whose portraits I may have occasion to paint, as a complimentary return for all the civilities they have bestowed, or as a duty I owe to the whole body of respectable medical men throughout our extended country, most of whom have been our pupils; and above all, as a warrant and surety to that august body of men, the trustees who preside over, with so much dignity and usefulness, the ancient University to which I have the honor to belong, that in receiving at their hands, the responsible office I have held so long, I continue not to lose sight of the principle that, while I live, I shall ever feel imperatively bound to exert myself to the utmost to fill the trust they have confided to my care—it being fully understood, that in carrying out my present plan and purpose, I shall not feel at liberty to violate domestic privacy, by any details, however interesting and important they may be.

After these preliminary remarks, I may state that I left our American shores last spring in as noble a ship\* as ever breasted an Atlantic wave, commanded by one whose gentleman-like manners and cultivated nautical skill won for him the admiration of all who placed their fortunes and their lives under his kind and affectionate care; and after a delightful passage reached England in twenty-one days. From Liverpool my steps were turned towards the romantic and picturesque scenery of Wales, commencing with the old and quaint town of Chester, celebrated for its Castle and the Roman remains within and around its fertile precincts; thence to Wrexam and Ruabon, adjoining which last is the celebrated Wynnstay Park, the principal seat of the lordly Wynns, the kings, as they are called, of Wales; thence to Shrewsbury, passing through the beautiful and cultivated vale of Langollen, and in succession through Ludlow, Hereford, Gloucester, and numerous other towns and villages known to fame; roaming among agricultural

districts inexpressibly beautiful and fertile, and in every way worthy of the commendations they have received. Hearing at Gloucester that the British Association was to meet at Oxford the next day, I determined to repair at once to that ancient and renowned seat of learning, and mingle with the distinguished men in every department of science and literature I was sure to meet within its classic walls, and "beneath its moss-grown domes with ivy turrets crowned." And I was not disappointed, for here I found assembled as distinguished a body as ever congregated for intellectual purposes, social enjoyment and diffusion of happiness within themselves, and among strangers from every portion of the civilized globe. This will be conceded, readily, when I mention the names of Sir David Brewster, Professor Faraday, Milne Edwards, of Paris, Professor Erenberg, of Berlin, Dr. Pritchard, Rev. Dr. Buckland, Henry Hallam, Sir John Herschel, Dr. Hodgkin, Professor Owen, Sir James Ross, the Marquis of Northampton, the Bishop of Oxford, Rev. Wm. Seoresby, Lyon Playfair, the Prince of Canino, Adam Sedgewick, Rev. Wm. Whewell, Dr. Carpenter, Richard Carmichael, of Dublin, the Chevalier Bunsen, Le Verrier, of Paris, the Earl of Rosse, Dr. Forbes, Sir John Rennie, Sir John Ross, Dr. Arnott, Professor Neillson, of Copenhagen, E. H. Strickland, Professor Struvè, of Russia, Sir J. W. Lubbock, Lady Hastings, Professor Mulder, of Utrecht, the astronomer Adams, and hundreds of others known by their discoveries and writings wherever genius is estimated or science revered.

It would be utterly impossible, in a discourse like this, to enter into details respecting the various papers read, or the lectures delivered, or the speeches made by distinguished savans on this occasion. But I cannot avoid referring, in a very brief way, to efforts made by a few individuals as well known on this side of the Atlantic by their writings as they are pre-eminent in Europe. I allude more especially to Faraday and to Carpenter, and select them in preference to others, inasmuch as their labors and researches have so intimate a relation to many of the most interesting and important departments of our profession, as not to be overlooked. It was understood that the former would deliver a lecture on galvanism in the Radcliffe Library, and hundreds of persons from the most remote parts of the kingdom visited Oxford for the express purpose of hearing him and of witnessing his experiments. I had been fortunate enough eight years before to hear him lecture at the Royal Institution in London; and from the pleasure and instruction I then derived, my expectations were raised to the highest pitch, and they were not disappointed; for now he stood before the assembled wisdom of the world, and the very excitement produced by that conviction was

sufficient, no doubt, to stimulate him to exertions he was unaccustomed to make upon ordinary occasions. The immense circular building was filled and crammed with ladies and gentlemen of the highest distinction; and so intense was the desire to hear every word that fell from his lips, that the most perfect silence and order reigned throughout the vast hall. On a platform raised a few feet above the heads of the audience the lecturer stood, his assistant by his side, under whose management was placed a powerful galvanic battery, and two or three immense magnets. The President of the Association, Sir Robert Inglis, and a few distinguished friends, were seated in the rear. Imagine a gracefullooking man, with very open expressive countenance, large rolling eyes, a figure above the medium height, well proportioned and rather thin than otherwise, equal in celebrity, if not superior, to any man in Europe as a philosophical and experimental chemist, thus standing before you, and you can easily appreciate my feelings. With an ease and composedness of manner not generally met with in public speakers, he soon entered upon his subject in a voice so clear, sonorous and distinct as to be heard at the most distant parts of the Rotunda, beyond the pillars and arches of the galleries, and which seemed to extend its vibrations throughout the immense dome above the heads of the congregated multitude. But the most interesting and surprising part of the lecture was the facility with which he shifted from the descriptive to the demonstrative part, and so intermingled philosophical discourse with experimental demonstration as to make every proposition laid down and every experiment shown as exact and luminous as mathematical truth itself, and all with an ease and quietness and rapidity of manner irresistibly pleasing and attractive. A single glance at his assistant, or motion with his finger, was sufficient to indicate his wish, and their movements in an instant became synchronous. No experiment failed, every observation told, and every individual in the vast assembly seemed to look, or say to himself, "perfectly right; unquestionably true; it must be so." So wrapt up, indeed, were all in the discourse, that their thoughts seemed to wander away from applause, and the long-reiterated plaudits, so common upon such occasions, were "few and far between"-illustrating the well-known fact, that the mind, when deeply and intently engaged, is seldom diverted by extraneous matter; and proving, beyond all question, that profound silence and attention on the part of an audience, are the strongest proofs of the substantial merits of a public speaker, and the greatest compliment that can be paid to his discourse. I have attended, in my time, for months together, the lectures of Hope and Murray of Edinburgh, of Sir Humphrey Davy of London, and occasionally most of the great lec-

turers on chemistry in our own country, and candor compels me to say that I have never listened to an individual who combined in so eminent a degree all the great qualities of a master as Dr. Faraday. It is only to be regretted that such a man should be compelled, either from necessity or inclination, to devote himself so assiduously to his pursuits; inasmuch as it is evident from his appearance that the operation of such a mind upon its corporeal particles must soon make important inroads upon health; and it is said he is well aware, by recent admonitions, that his constitution is not sufficiently strong to bear every burden he may choose to impose upon it, and that, accordingly, he has recently come to the conclusion to act the part of a good conservative, and to nourish the trunk of the tree in order that the branches may be the better able to flourish and fructify. Of the chemical merits of Dr. Faraday's discourse and experiments I do not feel myself competent to give an exact analysis; nor would there be sufficient space so to do. I will, therefore, barely remark that the object of this attractive lecture was to illustrate, by experiment, a series of observations published by him, in eight or ten papers, within the last two years, in the Philosophical Transactions, and in the London, Edinburgh and Dublin Philosophical Magazine or Journal of Science-all relating, more or less, to electricity and galvanism, the powers of which he illustrated in the most satisfactory way, through the medium of electro magnets, instruments of much greater force than steel or natural mag-By the application of one of these, after being thrown into action by a number of plates, he demonstrated that a fifty pound weight could be sustained by either end of the magnet in a horizontal or vertical position, and that in the same way bunches of common nails could be taken up and made to conglomerate in a very curious and surprising way. He did not pretend, however, I believe, to set these forth as novel or peculiar to himself, and must have been fully aware that our own distinguished Henry had illustrated long before by electro magnets a much greater degree of power than he himself displayed upon that occasion, and that his own countryman, the celebrated Scoresby, had previously taken up, at a lecture before the Royal Institution, ten thousand polished nails by a pair of permanent fasciculated magnets fifteen inches long, and produced the most novel and beautiful effect, by moulding them, while thus pendent, into festoons and other fantastic and picturesque forms. The action of magnets on metals generally, and on heavy glass in particular, was also discussed by Professor Faraday, and experiments shown to illustrate the various influences they exerted. Some interesting observations were likewise made by the same distinguished chemist a few days before at another meeting,

in relation to the fusion of diamonds by the galvanic flame of a Bunsen battery, and specimens shown in which these jewels had been converted into coke by Dumas, of France. Finally, in relation to Faraday, may I not mention, by way of encouragement to any young man of genius now within the reach of my voice, that he is essentially a self-made man, and was in bygone years merely the humble, hardworking, unpretending assistant of Sir Humphrey Davy? And what is he now? The greatest philosopher and chemist and lecturer the world contains, is listened to by crowned heads, and acknowledged by the greatest intellects of the age to be superior to themselves. a commentary upon rank and fortune and pride, upon folly and fashion and frivolity, when a poor youth like Michael Faraday makes himself a monarch in science, and Will Shakspeare, a wool-comber and stable boy, crowns himself with laurels no emperor has yet been able to place upon his brow. Let none despair so long as "God gives the increase and Apollos waters."

The next individual towards whom I was attracted at the association, both on account of his high reputation, and the acquaintance I had made with him in former years, was Dr. Carpenter, recently of Bristol, now of London, where he occupies the important positions of lecturer on physiology at the London Hospital, examiner on physiology and comparative anatomy in the University of London, lecturer on geology to the British Museum, a lectureship recently created by the will of the eccentric founder, the late Dr. Sweeny. Dr. Carpenter, in addition to these honorable appointments, is also Fullerian Professor of Physiology in the Royal Institution, where he has just completed a three years' course of lectures on that branch of science. This professorship expires every third year, and it is probable he will be elected again to the same office. When it is considered that Dr. Carpenter has held high rank as a writer for the last ten years, and published his valuable work on physiology, whilst a student; that he is now only about thirty-one years of age, and has created for himself, within that short period, an enviable reputation in every portion of the civilized world, it may be readily imagined that in meeting him at the British Association, I should feel disposed to devote more than ordinary attention to any subject which might happen to come under his investigation. Finding, accordingly, that he was to deliver a lecture on the physiology of the encephalon, I determined to devote myself assiduously to the physiological section, until I could make myself master of his views. He commenced by reference to a lecture delivered before the same association in 1846, and gave a brief recapitulation of the views then stated, from the published reports of that body.

ject of that communication was to bring under consideration the inferences to which we are led by the study of comparative anatomy, in regard to the functions of different parts of the human encephalon. The author considered that the great principle of Cuvier—that the different classes of animals might be regarded as so many experiments ready prepared for us by nature, who adds or takes from their various organs, and shows us the several results of these different combinations—though fully recognized in other departments of physiology, had not yet been fairly admitted into the study of the nervous system. He attributed this, in part, to the difficulty of determining the portions of that system which are truly analogous, or rather homologous, in different classes of animals; but this difficulty has, in great part, been removed by the growing conformity of opinion on this subject amongst comparative anatomists, so that he thought that the time was come for physiological deduction.

He first pointed out that our comparisons need not be restricted to vertebrated animals, since the ganglionic centres of invertebrata may be shown to be analogous to certain portions of the cerebro-spinal system of the vertebrata. He stated it to be a universal fact, that all organs of special sense have distinct ganglionic centres, which must be regarded as the instruments of their respective sensations, and as the sources of motion directly connected with those sensations; and that the whole cephalic mass of invertebrated animals was composed of a collection of such ganglia, without any vestige—except in the highest—of cerebrum or cerebellum. These organs make their first appearance in fishes, and bear, at first, but a small proportion to the chain of sensory ganglia which forms the anterior termination of the spinal cord.

In fishes we find distinct olfactive, optic and auditory nervous ganglia, together with thalami optici and corpora striata, the degree of development of which has no reference to that of the cerebrum; in fact, the bodies usually called the cerebral lobes of fishes, are, except in the sharks, which have vestiges of cerebral hemispheres, almost entirely composed of the homologues of the corpora striata. Hence Dr. Carpenter considered that these bodies, instead of being appendages to the cerebrum, really belong to the group of sensorial ganglia, and are to be regarded as together making up the ganglionic centres of common or tactile sensation, and of the movements prompted or directed by it. This chain of ganglia, although comparatively small in man, with reference to the bulk of the cerebral hemispheres, still exists in him; and must be regarded as the instruments of the same operations as those to which it ministers in the lower animals. Arguing from actions in the latter, and analogous phenomena in man in health and in

disease, the author attributes to the sensory ganglia the formation of sensations and the origination of respondent movements. To this category the purely instinctive actions of the lower animals, which seem executed without any idea of purpose, but in simple respondence to the promptings of sensation, appear referable; together with a variety of actions in man; such as that of yawning from the sight or sound of the act in another. Dr. Carpenter hence endeavored to show that we must regard the cerebrum as the instrument of the formation of ideas, of the memory of ideas and sensations, and of the intellectual processes founded upon them, which terminate in an act of the will; and he pointed out that ideas may produce the same effect on muscular movements as sensations themselves, as when the suggestion of the idea of yawning induces the action. He also showed how the anatomical connections of the cerebrum with the sensory ganglia would cause its communicating fibres to exert an influence on the latter, corresponding with that which is effected by the sensations directly received from the organs of sense. With respect to the emotions, he endeavored to show that they may be regarded as compound states resulting from the simple feelings of pleasure and pain associated with certain ideas, or classes of ideas; the feelings of pleasure or pain he would locate with the sensations which commonly excite them in the sensorial ganglia; whilst the formation of the ideas, which are essential parts of the motives and propensities, is clearly a cerebral operation; and he showed, in conclusion, how this view of the functions of the principal parts of the encephalon harmonizes with the known sleepless action of the emotions-first, in producing involuntary movements, and secondly, in stimulating and influencing the reasoning processes.

After a brief recapitulation of the preceding deductions from comparative anatomy, Dr. Carpenter brought under the notice of the medical section two remarkable cases, which he considered to be peculiarly illustrative and confirmatory of his views. In one of these communicated to him by Mr. Dunn, all harmonized well with the supposition that the functional power of the cerebrum and of the auditory, olfactive and gustatory ganglia, was suspended, whilst that of the optic and tactile ganglia remained in full force. The actions of the individual, for a long period, were such as might be legitimately referred to the consensual group; being all stimulated by present sensations, and not being, apparently, in the least degree the result of will, guided by intelligence. In the other case communicated by Mr. Noble, the intelligence and will were in full operation; but from a defect in the power of the will to excite muscular movement, the individual could not exert his volition, unless the object of the exertion were before his

senses. Thus he stated that if he were assured that upon extending his hand to a given point, he should receive a one hundred pound note, he could not make the movement unless the note were before his eyes; the sight of it thus guiding the action consensually.

Dr. Carpenter's views, however, on the physiology of the encephalon, will be found more fully stated in the review of Noble on the Brain, in Forbes' Journal for October, 1846, and the first of the cases brought forward at Oxford, as illustrative of them, is noticed in the same Journal for January, 1847. Though, at first sight, nothing but a case of hysteria, and treated as such by the Medico-Chirurgical Society, to which it had been communicated by the gentleman under whose cognizance it fell, it is, in the apprehension of Dr. Carpenter, one of the most remarkably illustrative cases he ever came across; and if he had wished, as he stated, to invent one in accordance with his views, he could not have done it better.

But Dr. Carpenter's chief subject of original investigation, during some years past, has been the structure of the shells of invertebrated animals; which, in the first place, he has shown to be *organic* in their character, and not mere inorganic exudations; and in the second, to have such *varieties* of structure as frequently to admit of the determination of the *genus* from a fragment invisible to the naked eye.

In the natural history section, Dr. Carpenter made some observations on the curious phenomena discovered by Sars, Eschricht and others, and generalized by Steenstrup under the title of the "Alternation of Generations." He stated that he had nothing new to offer as to the facts; but that he thought they might be generalized in a different and more philosophical manner. As hitherto understood, the "alternation of generations" menas that generation A produces a different form or generation B, the offspring of which is, again, A-each individual resembling its grandfather and grandchild, but differing from its own parent and offspring. Confining himself to two examples as types of the rest, Dr. Carpenter attempted to show that the process is really akin to the ordinary process of development in plants-that by leaf buds or gemmæ, and that by seeds or ova. Thus the aggregate salpæ produce solitary salpæ by ova, the result of sexual connection; but the solitary salpæ reproduce the aggregate by a budding process, with which sexuality has nothing to do, any more than in the formation of leaf-buds in plants. The only difference here is that the buds become detached from the stock that forms them-so in the case of the relation between the campanulate polypes and the medusæ. polype arising from the egg laid by a medusa, develops new medusæ as buds, not by a sexual process and the production of ova. Dr. Carpenter further suggested, whether the anomalous cases of non-sexual production of aphides and certain entomostracous crustacea might not be explained by attributing them to an *internal budding* process, similar to that which operates in the salpæ.

In the chemical section, Dr. Carpenter exhibited Talbotype impressions of microscopic objects, magnified from ten to two hundred diameters, taken with the solar microscope, and pointed out the advantages of this process over the Daguerreotype, for the delineation of objects in which the reversal of the lights and shades is immaterial, on account of the much greater facility with which it may be practised.

It was with great pleasure I met at Oxford, my old acquaintance Dr. Pritchard, who, in the presence of Prince Albert, the Chevalier Bunsen, Henry Hallam, Dr. Hodgkin, Sir Robert Inglis, and a host of other literati, read a very interesting and elaborate paper "On the Relation of Ethnology to other branches of knowledge." On the same day, at the geological section, Professor Buckland delivered a very animated and novel discourse on the Infusoria, found "in the green mantle of the stagnant pool," and endeavored to prove that they served the purpose of cleansing and purifying the water beneath; in proof of which, he mentioned that most domestic animals were known to prefer such water to that of the finest and clearest springs, that he himself had drunk such water, and found it sweeter and more palatable than any he had ever tasted. I need hardly say that the subject attracted very general attention, both from its novelty, and the amusing and very delightful manner in which it was treated by this very celebrated personage, who is not less remarkable for his playfulness of manner, good humor and wit, than for his profound knowledge of almost every department of physical science. At the same time it was very evident, from the expression of many who listened to the discourse, that there was a lurking suspicion on their part, that the benevolent and popular speaker was not altogether serious in the views he had taken, and that his real object was rather to startle and amuse, by the novelty and queerness and oddity of the subject, and to elicit inquiry, than to communicate positive and substantial information—his propensity for fun and jocularity being very generally understood, not only by members of the association, but throughout the kingdom.

At the zoological section, a most interesting discussion took place in relation to the anomalous animal, the *lepidosiren*, so admirably described by Professor Owen. Dr. Melville, a talented young Scotchman, and the assistant of Professor Acland, of Oxford, contended, in opposition to the views of Professor Owen, that the animal in question was a reptile, and not a fish. Professor Owen replied in a very mild

but decisive manner; and this led to a general debate, in which the Prince of Canino—Charles Bonaparte, formerly well known in this country for his knowledge of ornithology, and highly esteemed as a gentleman of most benevolent and courteous disposition—Dr. Carpenter, Sir J. Richardson, Mr. Hogg, and Professor Milne Edwards, of Paris, took part. This led to a resolution that Dr. Melville be requested to procure specimens from Africa and America, and make a report on the affinities and structure of the animal for next year's meeting of the association.

I should lose myself, however, were I to attempt to follow out and recount a fiftieth part of all the interesting details I had the opportunity of listening to upon this interesting occasion. Suffice it, therefore, to say, that from beginning to end, the utmost harmony and good fellowship prevailed; men of the highest rank and intellect commingled together as relatives and friends; every individual, however humble his sphere, received countenance and support, and every country had either its own representative, or its full share of praise awarded by the general acknowledgment of the association, or at the hands of its distinguished president. It will be gratifying to you, therefore, to learn that our own beloved land received from Sir Robert Inglis a full acknowledgment of her claims, when he said, speaking of the electric telegraph: "It was, however, in the United States of America, that it was first adopted on a great scale, by Professor Morse, in 1844, and it is there that it is now already developed most extensively. Lines for above one thousand three hundred miles are in action, and connect those states with her majesty's Canadian provinces." He went on to say: "So easy of attainment does such a result appear to be, and so lively is the interest felt in its accomplishment, that it is scarcely doubtful that the whole of the populous parts of the United States will, within two or three years, be covered with a telegraphic net-work, like a spider's web, suspending its principal threads upon important points along the seaboard of the Atlantic on one side, and upon similar points along the Lake frontier on the other." Again, speaking of etherization, the same distinguished gentleman observed, "it is the remarkable property of ether which has led to its recent application with such success as may well lead us to thank God, who in his providence has directed the eminent physicians and surgeons amongst our brethren in the United States to make this discovery—a discovery which will long place "e name of Dr. Charles J. Jackson, its author, among the benefactors of our common nature."

I cannot take leave of Oxford, and the British Association, without adverting to a discourse intimately associated with the best interests of

the scientific investigations there held, and with influences it is likely to exert, for years to come, in a printed form, upon every class of literary men its pages may be destined to reach. I allude to a sermon preached by Wilberforce, Bishop of Oxford, before the assembled multitude of savans and citizens, after the full organization of the meeting. The object of the discourse was to impress upon the minds of all present, the necessity and importance of humility in reference to scientific pursuits; and this he demonstrated in the most simple, cogent and satisfactory way, in a series of well-written, sensible remarks and arguments, the truth of which seemed to be assented to by the silence which pervaded every part of the great church of St. Mary's, and by the pleasure which beamed in every countenance, whilst he continued to To me, however, delightful as the theme was, coupled with the consciousness of being in the presence of, and listening to a son of the great and good Wilberforce, whose character and writings I had so long admired, there was, in some other respects, disappointment, especially as I had been led to expect, from every quarter, a most finished display of elocution, and even of unsurpassed eloquence. will readily understand, when I say that the Lord Bishop, about thirtyfive or forty years of age, is of full habit of body, short in the neck, of benevolent, but rather heavy expression of countenance, and in action so free from sprightliness, as to promise nothing in the shape of ornament and show. This was soon made manifest by the beginning, and confirmed by the termination of his discourse, which was delivered throughout, in a clear, distinct, but monotonous voice, without one particle of gesture or animation, and with a timidity of manner only to be explained by the supposition that he was overwhelmed by the conviction of being gazed at, and scrutinized by a body of men so numerous, and so capable of criticizing every word that fell from his lips, as to inspire him with solicitude and awe. In hope that this may serve as an explanation of undoubted infelicity of manner, and account for imperfection of delivery, when thus incongruously associated with simplicity and force and grandeur of thought, and propriety of diction, I may mention that his arms seemed powerless, and his eyes so concentrated upon his paper, as never to be lifted from it, from the commencement to the end of his holding forth. Perhaps I may have been the more influenced in these views, by being accustomed to listen with more pleasure to extemporaneous, than written sermons, believing with Goldsmith, that high dignitaries of church and state are very apt to be inferior in eloquence and effect to Methodists and other dissenters, who, not depending upon discourses to be read from year to year, and it may be, for a long succession of years, are more likely to rely upon

intellectual exertion, and upon having their minds exercised and sharpened by self-cultivation, and the pressing excitement of an occasion, than by the sober and more homely process of committing their thoughts to paper, and delivering them, mechanically, from the pulpit.

From Oxford my steps were turned towards London, where I expected to meet most of the old medical friends I had parted with eight years before; and to form the acquaintance of others who had sprung into notice within that period. My first calls were upon Sir James Clark, Sir Benjamin Brodie, Mr. Liston, Mr. Guthrie, Dr. Forbes, Mr. Alexander Shaw, Mr. Travers, Dr. Bright, Dr. Hodgkin, and others. Sir James I found but little altered in appearance, notwithstanding the hard work, mental and corporeal, he had encountered since my last visit, and the daily professional labor he still goes through. As a physician held in the highest estimation throughout the kingdom, he is consulted, in all difficult cases, especially those relating to the chest and stomach, by the Queen, whose confidential medical adviser he has long been, by most of the nobility and gentry of the land, and by innumerable foreigners whose constitutions have suffered from the effects of climate, upon which he has written a most classical and valuable work, and more especially upon derangements of the liver and alimentary canal, so commonly attendant upon long residence in warm latitudes. Owing to these circumstances I found his time too precious to be encroached upon to the extent I could have wished, and mainly depended upon occasional opportunities of enjoying his society in the elegant hospitality he extends to his friends, professional brethren and strangers from all parts of the world.

With Sir Benjamin Brodie, who still occupies, very deservedly, a most exalted rank as a medical and operative surgeon, I renewed my acquaintance, found him from day to day at his post dispensing inestimable favors to rich and poor in the shape of most valuable advice, and contributing by his skill, and especially by the prudence and caution for which he is very remarkable, to effect cures and alleviate suffering in many a case deemed almost hopeless and irremediable. why should I expatiate to you upon his merits, when his valuable productions, so conspicuous for the modest merit which shines throughout their pages, so replete with the most sound, substantial information, and with practical rules almost unerringly certain, are constantly before your eyes, are read with an interest and avidity seldom bestowed upon other writings, and with an advantage rarely derived from other sources? Frequent and familiar as my visits were to him during my sojourn in London, I had only to regret they were not more so, and more especially my inability to avail myself of his obliging invitation

to spend with him, after my return from France, as much time as I could spare, during the month of September, at his beautiful country seat a few miles from London.

Few hours elapsed, after reaching the metropolis, before I found my way to the domicile of my old friend Liston. I was shown into a pillbox of a room, tastefully fitted up, and filled with medical and surgical portraits, from old Abernethy, with his hands knowingly thrust into his breeches pockets, down to Jobert of Paris, with his enormous black whiskers and heroic figure and phiz. Whilst intently gazing upon these, the door noiselessly opened behind me, and a hand laid heavily enough upon my shoulder to face me about, was followed by the exclamation, "what under the sun has brought you here again?" Before I could answer the question, I was hurried into another room, and both sinking simultaneously into luxurious arm-chairs, a conversation was commenced and continued for a considerable time, occasionally interrupted by the pressure of the sides and whisking of the tail of the enormous black cat Tobey upon almost every part of my person,this respectable gentleman, now grown corpulent, no doubt recollecting the libel I had published in relation to his foot and my plate of soup, and above all in bestowing upon him the common epithet of Tom, instead of the more honorable and dignified one of Tobey. Upon taking leave, Liston said to me, "Come here at eight o'clock to-morrow morning, and I'll take you down the Thames in my yacht, and then out to sea, and show you fun you never dreamed of on board your splendid packet-ships." I excused myself upon the ground of having made a previous engagement with Sir Benjamin Brodie and Dr. Bright —inwardly pleased at the opportunity of escaping all the désagrémens of sea-sickness, which is sure to follow an excursion in such a craft, with a positive certainty of being visited upon any one even like myself, who had crossed the Atlantic numerous times without being subjected to any sickness at all. A few days after this I saw my friend in all his glory at the North London Hospital, his lofty forehead surmounted by a cap, his broad chest and figure covered in part with an apron, and his right arm brandishing a long and dagger-shaped knife. I came upon him unawares and stuck a finger into his side, when he immediately turned round, and said to the fine-looking young men who composed his class, "Ah, this is the American professor who has libeled my cat by calling him Tom." He then turned round, introduced me to Professors Thompson, Quain and Grant, gave me a position where I could distinctly see all he was going to do, and with a graceful turn of the body and corresponding sweep of the knife, upon a patient previously etherized and prepared for the operation, speedily worked

out a pair of anterior and posterior flaps, and almost in the twinkling of an eye amputated the limb as near to the hip as he thought it proper and safe to go—the poor girl not giving the slightest demonstration, by movement or scream, of what had been done. Some minor operations followed-all performed in the same quiet, easy, unpretending way, without any flourish of trumpets or display of flashing blades, and almost without the patients and by-standers being aware that so much could be effected with so little formality and fuss. Soon after this I took leave of Liston and left for Paris. Upon my return in September, I called again, and learned from him with regret that he had been ill soon after I had parted from him, and had lost thirty ounces of blood from an abscess in the throat, brought on, as he imagined, from attendance upon medical friends laboring under malignant erysipelatous disease. To recover from this severe attack, fortunately unconnected with the trachea or lungs, he had gone to Scotland among his friends, and after freedom from exertion and care, by reveling amidst the romantic scenery of his native hills, had returned to London in better health than he had enjoyed for many years. Before leaving London I saw him repeatedly, dined with him and Tobey and other friends in the most unrestrained way, talked on all subjects, professional, grave, farcical and funny, heard many queer anecdotes and histories of men, and hospitals, and medical schools, went back to the days when he was reveling at Edinburgh in the sweets of Barclay's rooms, and I in those of Monroneither of us dreaming at the time that we should ever occupy similar chairs, or preach to those who some twenty years hence will be destined to play a part in the same drama, where they are now merely scene-shifters behind the stage, and who, in turn, will tell their pupils many odd stories about their masters and cotemporaries in days of "auld lang syne." "Sic unda supervenit undam," and it is only right and just that it should be so. That Liston is a great master, in his line, there can be no doubt. Even his enemies admit this. That he has his defects, too-and who has not?-his best friends are willing to allow. Of one thing, from personal observation, I am well assured—that however playful and eccentric he may be among his friends and in hours of relaxation and ease, no such traits are visible amidst scenes of suffering, or whilst investigating the nature of disease. Full of sagacity, and cautious in the extreme, his mind seems intently fixed upon the case before him, his fine lofty and expanded forehead giving evidence of power, whilst his thoughtful features, illuminated by the light that gleams from his eagle eye, proclaim, in language not to be misunderstood, that he is "wise as the serpent and harmless as the dove." I will only

add that his enormous practice and his success are the best evidence of all I have advanced.

My friend Guthrie, of whose head and hand you have heard so much, through all the medical and surgical histories of peninsular campaigns, it affords me great pleasure to say, is still living, and occupies as high a position in usefulness and fame as most of his compeers in the great metropolis of the world. In activity and energy, notwithstanding all he has gone through in his boyish days, (and a soldier's life is not the one best calculated to promote health and longevity,) he has few equals. Up by the "dawn's early light," and stirring, assiduously, till the "twilight's last gleaming," he gets through an amount of business almost incredible, and accomplishes more, in a given space, as a writer, than, perhaps, any medical man in England. He is now engaged, and has been for two or three years past, in summing up the amount of the vast experience he acquired on the field of battle, and subsequently, in private and hospital practice in London. His work on gunshot wounds, on hernia, on diseases of the bladder; his lectures on wounded arteries, on wounds and injuries of the abdomen; his successful operations on the eye, and management of its multiform maladies, all proclaim his merit and skill. When I add that in kindness of heart and in hospitality he has few equals, I strike a balance in his favor which no one acquainted with him will hesitate to award as justly his due.

Dr. John Forbes, whom I had great pleasure in meeting again both at his own house and at the hospitable table of Sir James Clark, must be well known to you all, through the dissemination of the valuable Journal which has extended his reputation, during the last twelve years, to the remotest corners of the world. Although brusque, and somewhat plain in appearance and manner, and, seemingly, upon occasions, excitable, there are few men in the profession whose hearts are sounder at the core, as far as I could judge and learn, than his; and none whose reputation for hard work, and honesty and excellence of private character, stands more pre-eminent. That his unsparing denunciations of the writings of his cotemporaries at home and abroad, especially those of Marshall Hall, and of some of the most eminent and popular physicians of our own country, have procured for him unmerited reprobation, there can be no doubt. Some of these reviews, however, it is but fair to say, were not the work of his own hands, there is reason to believe, but were imposed upon him by those who had an interest at stake which he could not possibly see or understand. He has now retired from the Journal, and devotes himself exclusively

to a large practice; and in so doing will no doubt add to his own personal comfort as well as fortune and fame.

With Dr. Bright, I formed, for the first time, an acquaintance soon after my arrival in England—having been introduced to him by Sir Benjamin Brodie, of whom he is the intimate friend. He has long been known by reputation on this side of the Atlantic, and indeed all over the world, by his work on the kidney, and by his investigations into the nature of the disease of that organ, to which, by common consent, the profession has appended his name. In appearance Dr. Bright is about fifty, rather short and stout in figure, has very dark and peculiarly expressive eyes, and bears no inconsiderable resemblance to the late distinguished Professor Hosack, of New York. He is the brother-in-law of the late Sir William Follet.

Mr. Copeland, the eminent London surgeon, whom I met years ago at the house of Professor Cooper, I had the happiness to renew my acquaintance with. I met him in Paris in September last, and spent a whole morning with him at the house of Amussat. Upon my return to London I saw him again and again, dined with him and in company with his relative, Dr. Bisset Hawkins, and with Dr. Southey, both eminent in their particular departments. There are few, if any, better informed surgeons in England than Mr. Copeland. Many years ago he published an admirable and most useful practical work on the rectum. His practice has long been very extensive, and he has the singular merit of possessing a judgment so sound, and an ingenuity so peculiar, as to treat by methods exclusively his own, and by operations contrived upon the spur of the occasion, diseases which few have found it easy to manage. He is a most honest, kind-hearted gentleman, a fine classical and belles-lettres scholar, very upright and plain in expressing his opinions on all subjects, full of good humor, fun and frolic, and yet so refined and gentleman-like as to be respected by and endeared to all who know him. Some of his peculiar surgical views and operations, which he has not published, I shall have occasion to lay before you hereafter.

Mr. Benjamin Travers, the surgical veteran, who distinguished himself years ago by a masterly work on Constitutional Irritation, another on Wounds of the Intestines, and by other important publications, I had the good fortune to see during my late visit; and it was an especial gratification, inasmuch as I had failed to meet with him during my visit eight years since, though I had known him in days of yore, when he and Sir Astley Cooper, and Marcet and Bateman, were bright stars sending forth rays which many youngsters, myself among the rest, were endeavoring to collect. He is still a tall, fine-looking gentleman-

like man, very courteous in his address, and so polite, modest and unassuming as to give the impression that he is constitutionally afraid to express, through cautiousness and timidity, a decided opinion; and this, if warranted by longer and better acquaintance, I would almost venture to affirm to be one of the striking characteristics of his mind. It is said that his opinions are very *liberal*, and that, politically, he is almost a democrat. He is still engaged in practice, chiefly of the consulting kind, and his opinions in difficult cases much sought after and valued.

My friend Mr. Alexander Shaw, the brother-in-law of the late Sir Charles Bell, I was happy to find advancing in his professional career. He is surgeon to Middlesex Hospital, and lecturer, conjointly with Mr. Arnott, on surgery in the same institution—having probably received the appointment from the satisfaction he gave as lecturer on anatomy in the medical school formerly attached to the hospital. Shaw, who is now about forty years of age, began his professional education in 1822, by attending the lectures of Sir Charles Bell, and of his brother the late Dr. John Shaw, in the school of Great Wind-After some years occupied in London in acquiring professional knowledge, in making class dissections, in adding to the preparations and drawings of the museum, in giving demonstrations to the pupils, in superintending the dissecting rooms, in aiding, as far as his services were useful, in the investigations into the physiology of the nervous system, pursued at that time with great zeal by Sir Charles, he went to Cambridge, intending to take a university degree, a step then requisite for entering the College of Physicians as fellow; but owing to his brother's death in 1827, he relinquished that plan, and devoted himself to surgery, to qualify himself to practice as a consulting and operative surgeon. Till 1836, when Sir Charles Bell went to Edinburgh, being elected Professor of Surgery in the University, Mr. Shaw continued to act as his assistant in private practice, and he gave his services to Sir Charles in forwarding his various researches, physiological and surgical, as well as assisting him in preparing his different works for publication. At that time he was elected surgeon to the Middlesex Hospital, and soon afterwards became full surgeon. Mr. Shaw is, also, the author of several original publications. still a pupil he wrote various articles of a controversial nature in the medical journals, to vindicate the claims of Sir Charles to the discovery of the distinct functions of the nerves, against those of Magendie, Mayo, and others; and in 1839 he published an octavo volume, entitled "A Narrative of the Discoveries in the Nervous System." reference to the same subject, it may be stated that, when a posthumous edition of Sir Charles Bell's work on the anatomy of expression in

painting, was recently published, Mr. Shaw added an essay on the nervous system: and also took that opportunity of giving an abridged yet comprehensive view of the discoveries made by his brother-in-law, and of his theory of the distinct classes of the nerves. Another subject has also occupied Mr. Shaw's attention, viz., Rickets. Having observed that, besides causing deformity, rickets retards the growth, so that the diminution of the figure is sometimes the most prominent visible effect, he proceeded to examine the changes in the various parts of the skeleton which are produced by the temporary arrest of the growth in persons affected by the disease. As in the progress of growth from infancy to manhood, remarkable changes take place in the relative proportions of one part to another, so that there are one set of proportions characteristic of the child and another of the adult, Mr. Shaw was led to expect that rickets, being a disease of childhood, and occurring at a period of life when the processes of growth are going on with greatest activity, must have the effect, if it interrupt the growth, of preventing the adult from acquiring the relative proportions peculiar to his age, so that he will carry in his figure signs of the original or infant conformation. By taking the measurement of numerous adult skeletons deformed by rickets, he found his views confirmed. Thus, it is characteristic of the child's form, to have the head and upper part of the body large and bulky, compared with the pelvis and lower extremities: and in adult skeletons, which have been the subjects of rickets, during childhood, it will be invariably found that they have similar relative proportions more or less distinctly marked. important practical conclusion in connection with obstetrics, is drawn from this view; for, in the child-bearing female deformed by rickets, the impediment to the passage of the child's head in delivery, does not arise from the misshapen condition of the pelvis alone, but is produced, also, by the diminutive size of the bones, and the consequent narrowness of the canal. From these data Mr. Shaw has shown, that by taking the average of the measurements of a large series of deformed female pelves, the bones are deficient in growth to the extent of nearly one-fourth of their natural size. By applying the same kind of observations and reasoning to the bones of the head, in which the cranial and facial bones grow at different rates, some curious results have been obtained: and questions of practical interest are suggested by the changes in the forms of the jaws caused by the interruption of the growth, and the derangement of the process of dentition consequent on those changes.

In a short paper in the Medical Gazette, Mr. Shaw has offered an explanation of the vorticose arrangement of the veins of the choroid

coat of the eye. These vessels, in his opinion, are arranged in that manner to provide against the delicate structures of the interior of the eye being injured by the regurgitation of the blood, during violent fits of expiration, as in sneezing, coughing, &c. At one of the meetings of the association for the advancement of science, Mr. Shaw read a paper on the circulation of the liver, and more particularly on the structure of the venæ cavæ hepaticæ. His object was to show that these veins are formed as rigid tubes, out of the solid substance of the gland, in order to permit the blood returning from the liver, to be assisted in its flow towards the heart by the power of suction in the chest which comes into play at each inspiration—showing, under these circumstances, were they not of rigid structure, that they would collapse. In corroboration of this view, he refers to the peculiar mechanism of the orifice in the central tendon of the diaphragm, through which the venæ cavæ hepaticæ pass to enter the left auricle of the heart. During inspiration, this orifice is stretched out and dilated to the utmost, by the contraction of the fibres of the diaphragm, and it accordingly allows the blood to pass out from the liver with great freedom at that time; but, during expiration, when there might be a regurgitation of blood from the heart, the orifice is closed, or diminished, owing to the relaxation of the diaphragm, and to its edges acting as a valve in preventing reflux of the blood. I have been the more particular in noticing these claims of Mr. Shaw, from a conviction that the rank which he ought to hold in the profession is not sufficiently known and appreciated, either at home or abroad, owing to his singularly retiring disposition, and to the innate diffidence and modesty of his nature, which will not allow him to rise to that eminence many others reach, without one-half of his native talent and information.

But there is one individual I have yet to notice, who occupies in public estimation so exalted a rank, not only in England, but throughout Europe, as to deserve much more consideration than the limits of a single lecture can possibly allow. I allude to Dr. Thomas Hodgkin, a member of the Society of Friends, as ripe and finished a scholar, perhaps, as ever came from the walls of any university; as good an anatomist, physiologist, pathologist, surgeon, physician, as England, or any other country ever educated; as firm a friend of the human race, and more especially of the helpless and degraded portions of it, as ever put forth an arm and voice for its succor and support; as good a Christian as God ever infused his spirit into; as firm and uncompromising a champion of justice and right, as determined and unflinching an opponent of injustice and wrong, as the world ever saw: and all these high qualities so unobtrusive and refined, so assimilated with feelings and

sympathies, and with charities so unbounded and diffuse, so tempered with mildness and modesty, and forbearance and truth, as to entitle him fairly to be considered as a specimen of human greatness and goodness personified and combined. This will, no doubt, sound to you like unqualified, extravagant, unmerited praise; but, when I assure you that every tongue in England proclaims the same, and that my own limited observation confirms all I have heard, I cannot do less than state what I have reason to believe to be perfectly true. In proof of the correctness of these positions, I may add that his father, a most respectable member of the Society of Friends, determined to educate his two sons in the best possible manner, and then to devote one to the law, the other to medicine. His hopes in both were amply realized, by the former becoming a distinguished advocate, and subsequently a minister of the Gospel, in which capacity he is now, throughout suffering Ireland, achieving a vast amount of good; and by the other raising himself to a height in his profession which few, considering the combination of qualities he has united with it, have ever attained. The first opportunity, perhaps, afforded Dr. Hodgkin to distinguish himself, was the task he undertook of putting together, and systematically arranging, and making useful by an explanatory catalogue of great length, one of the neatest and most valuable anatomical and pathological cabinets England contains—that of Guy's Hospital. were Dr. Hodgkin's services upon this occasion, as to entitle him, in public estimation, to any appointment within the gift of the managers of the hospital; and yet, upon the occurrence of a vacancy, instead of receiving the appointment, his claims were rejected, and the office given to one whose influence in church and state was superior to that of the plain, unsophisticated, intellectual, pure-minded member of the Society of Friends. Subsequently, when the museum was thrown into disorder by the mismanagement of heads and hands not calculated to extend and improve it, Dr. Hodgkin's benevolence was appealed to, and in an instant he repaired to the scene of action, and, like a true Christian, forgetting and forgiving his wrongs, soon put confusion to flight, and established in its place perfect regularity and order. On these subjects I never heard Dr. Hodgkin open his lips, and I only state what every member of the profession with whom I conversed believes to be true. In proof of the perfect honesty and fearlessness of the man, I may also remark, that, years ago, when a celebrated trial took place to investigate charges brought by a journalist against a surgeon who had been unfortunate in a case of lithotomy, an accusation being made that he had destroyed the patient by opening, improperly, the wrong viscus, Dr. Hodgkin, from his high character for skill and integrity, was selected

by both parties to make the dissection. This was done in the presence of one who had made the charge, and who was to appear on the trial as a witness against the operator, and no opening of the kind was found. Whilst Dr. Hodgkin's head was turned in another direction, the witness, there was reason to believe, pushed his finger suddenly through the part, and immediately exclaimed, "Why, Doctor, the opening has escaped your notice; here it is." "Then," said the Doctor, in the coolest and most determined manner, "Thou hast made it thyself;" and gave his testimony in court to the same effect, and to the utter confusion of the accusers, and the acquittal of the unfortunate surgeon. The medical works of Dr. Hodgkin are not numerous, but of the most interesting and solid description. His two volumes, especially, "On the Morbid Anatomy of the Serous and Mucous Membranes," comprising a course of lectures delivered some years ago, are substantial proofs of the extent and variety of his information, and of the originality of his views. On collateral subjects, especially those connected with the advancement of Christianity, on the British colonization of New Zealand, on the Hudson's Bay Company, in the reports of the Aborigines' Protection Society, and throughout various numbers of the Colonial Intelligencer, or Aborigines' Friend, he has written copiously, and by his influence and example, contributed largely to benefit all who have had the good fortune to excite his sympathy or attract his attention. proof of the almost universal estimation, I may add, in which Dr. Hodgkin is held, there is scarcely a day that we may not meet at his hospitable board the most distinguished men from every quarter of the globe, harmoniously assembled with the humblest individuals his philanthropy has gathered around him. Of his extraordinary freedom from selfishness, I may also record, that upon one occasion, not long since, when a nobleman high in power was desirous of serving him in the most substantial way, by leaving at his disposal an office, which he took for granted he would secure for himself, our benevolent friend bestowed it quietly upon another whom he thought in every way worthy of the gift. This I learned not from himself, but from one well acquainted with the fact. From the same source I understood it was no uncommon thing for medical men of every age and degree of intelligence, when they wished information on any subject, and were desirous of saving themselves trouble and research, to apply to Hodgkin for it, with a certainty of not being disappointed, and occasionally with an ingratitude on their part which induced them to appropriate to themselves opinions and facts belonging to him. I will conclude my account of this very extraordinary, most virtuous and intellectual man, by stating that he is about fifty years of age, a bachelor, thin, and

rather below the medium height, of large expressive features, brilliant eye and healthful complexion, very upright in figure, quick and stirring in all his movements, and so kind and benevolent in manner as to win almost immediately the affection of all who approach him. No wonder, then, he should be largely engaged in practice, and still less, should refuse fees when he conceives that the circumstances of his patient are such as not readily to afford giving them. Often, I am told, has he been known to pursue a patient and insist upon returning the sovereign left upon his table.

With great pleasure I formed the acquaintance—through Dr. Hodgkin—of a very rising and talented young man, Dr. Henry Bird, of London, who has distinguished himself within the last three or four years, by successfully extirpating ovarian cysts, some of them of very large size, upon the plan previously executed by Dr. John Atlee, of Pennsylvania, and Mr. Clay, of England. All of these preparations, beautifully put up, either in spirits or in a dried form, I had the opportunity to see and carefully examine. Each operation, eight in number, proved successful, probably, as Dr. Bird remarked, from the care taken by him to select his cases, instead of operating upon patients without discrimination.

At the table of Mr. Liston, I also met with a talented surgeon who has already made himself known to the profession and public, by his knowledge of diseases of the eye, and by his skill as an operator on that organ. I mean Mr. Dalrymple, son of the venerable and distinguished Dalrymple, of Norwich. Through his kindness, I visited with him the "Royal London Ophthalmic Hospital," with which he is connected, and saw him prescribe for numerous interesting cases, with an address and ability which cannot fail to procure for him, at no distant day, very high rank.

But, of all the young surgeons and physicians with whom I became acquainted in England, no one pleased me more than Dr. H. Norton Shaw, a gentleman about thirty years of age, born in the Island of St. Croix, of English parents, and educated in the United States, Sweden, Germany, France, England, and Copenhagen, at which last place he took the degree of Doctor of Medicine, and subsequently obtained a diploma from the College of Surgeons, of London. Few men of his age, perhaps, are such proficients in ancient and modern languages; the most of which last, he speaks as fluently as English; and few have traveled so extensively in Europe, and in North and South America, and the West Indies. He has published, in the different medical periodicals of Europe, essays on the medical legislation of various countries; and in the transactions of the Medico-Chirurgical Society, an

interesting memoir on fractures of the lower extremity of the radius, together with their treatment, according to the principles of Professor Tenger, of Copenhagen. Before the Ethnological Society of London, an interesting paper was recently read by him, on Scandinavian crania, another on Norwegian prisons, before the Statistical Society of London, and others on the vital Statistics of Denmark. From all I saw of Dr. Shaw, I think I may confidently predict that he is likely to distinguish himself, not only in science, and in his profession, but in legislation, and politics—being ardently devoted to republican principles and institutions, and connected by intimate relations, with most of the liberal spirits of Britain, and other parts of Europe.

I cannot pass by, without some notice, my old friend, Professor Samuel Cooper, well known all over the world for the variety and extent of his surgical information—as exemplified in his First Lines, and in the almost unequaled production, the Dictionary of Surgery. I had a short interview with him in London, just before my departure, and was pleased to find him looking so well, especially as he had lately suffered from an attack of disease, which obliged him to go abroad.

With Dr. Watson, so well known in this country, by his valuable work on the Practice of Physic, I became acquainted. He is a thin, sallow-looking man, with fine intellectual head, and pleasing countenance and manners. His practice is enormous—having been introduced into it by the immense reputation he acquired by his book, which is as much appreciated in Europe for its simplicity and clearness and practical value, as on this side of the Atlantic.

It would be impossible for me to go into further detail of the prominent physicians and surgeons of London; I must therefore content myself by observing that I had the pleasure of meeting with several at the Harveian Society, where Dr. Hodgkin, the president, delivered a most interesting lecture on Medical Reform, and found them not only highly polished and agreeable gentlemen, but, evidently, judging from their style of speaking in debate, and from their conversation, extremely well informed in all the departments of their profession. I may single out from amongst them, especially, Dr. Williams-well known in this country, through his pathological writings—a thin, active, sprightly looking man, with very expressive countenance, and head so finely developed, as to resemble in size and form, that of Bichat, his whole appearance and bearing, indeed, approximating that of an American or Frenchman-Dr. Stroud, a most benevolent old gentleman, very stout and vigorous in appearance, a chaste and beautiful speaker, and evidently a man of learning and science-Professor Murphy, a tall, thin, fine looking man, with high and arched forehead, very fluent in discourse, and well calculated, by his lucid and simple mode of expressing himself, to convey to a class substantial and accurate information—Dr. Wigan, a large, powerful man, about fifty-five, of easy, engaging manners, well known for his peculiar views of the functions of the brain, and for his writings on the "Duality of the Mind, and on some of its Corollaries"—Dr. Theophilus Thompson, Dr. Day, Dr. Hare, Dr. McIntire, and others.

It may easily be imagined that, sojourning only for a week or two at a time in the metropolis of the world, containing two or three millions of people, and extending over a surface of many miles, it would be impossible for me to see every medical man, however distinguished. It will be proper for me, therefore, to state that several whom I had known before, I could not find leisure to see again, more especially as I wished to form the acquaintance of others who had been ushered into notice, since my last visit. Accordingly, although well acquainted, personally, with some, and, by reports upon which I could rely, with others, I will not undertake to tell you that I know, from having met and conversed with them, that my old acquaintance, Mr. William Lawrence, still delivers a most valuable course of lectures on Surgery, is a fine classical and German scholar, a man of great genius, is adored by his students, is very rich, lives in magnificent style at Ealing Park, is a great reader, is not persecuted for his liberal opinions as much as he used to be, and is still considered one of the greatest surgeons and men England ever produced—that Mr. Green, although a man of fortune, and retired from general practice, still lectures occasionally, and is celebrated for his introductories; which, coming from a tall, handsome man, of Tory principles, who thinks and says that science and Church and State, and poetry and metaphysics, and Hunterian orations fluently and extemporaneously delivered, and the dreams of Coleridge, by whom he was educated, are necessarily associated, cannot fail, when thus put forth by one so benevolent and kind-hearted as he is known to be, and addressed to the students of a monarchical government, to produce a most marvelous effect—that Quain and Sharpey, both good anatomists, and men of talent, with full share of tact and discretion, still hold their own, to use a Yankee phrase—that Ferguson, about forty, tall, handsome, very civil and agreeable, a smooth, easy lecturer, a capital operator, is advancing in public opinion—that Key, also tall, handsome, well dressed, very gentleman-like, finely educated, full of talent, the nephew of the late Sir Astley Cooper, and a beautiful operator, has attained, at the age of forty-five, a reputation so high as to procure for him very large practice, and high professional standing-that Gordon Latham, lately elected physician to Middlesex Hospital, tall, stooping, forty, a great linguist, and full of information-Moncrief Arnott, a hard-working man, president of the Medico-Chirurgical Society,-Copland, the author of the Dictionary, very learned, very honest and independent in sentiments-Solly, a short, small man, an excellent anatomist and practical surgeon-Legros Clark, surgeon of St. Thomas' Hospital, a good lecturer, and celebrated for his urbanity-Paget, a self-taught, hard-working man, of native talent-Luke, about forty-five, surgeon of London Hospital, a man of sharp eye, medium height and size, good looking, polite and attentive to his pupils and patients, full of originality and mechanical ingenuity, who treats fractures better than any man in London, a good operator, in hernia especially, and one who keeps up with the knowledge of the times-Pereira, also physician to the London Hospital, a good-looking personage, of medium size, with black hair and whiskers, who lectures well, is a profound German scholar, and very celebrated for his writings on, and knowledge of materia medica-Southwood Smith, physician to the Fever Hospital, a dark, Jewish looking man, of middle height, about fifty, of indomitable energy, especially in measures tending to benefit the people, by drainage and other sanatary regulations-Henry Holland, very rich and popular, celebrated as a traveler, has the art of getting over a great deal of ground in a short time, and for picking up much interesting information-Chambers, well known for his enormous practice among the aristocracy-Monro, Sutherland, Sir James Morrison, Dr. Conolly, a man of talent and acquirement, each celebrated under the appellation of "mad doctors," have all, in their own peculiar way, more or less merit and reputation-together with others, if time and space would allow, I might easily bring before your notice.

I cannot avoid, before closing, making one remark, which I hope and believe cannot fail to be appreciated and remembered. Many American students, after graduating here, sail directly for France, without having the slightest knowledge of the French language, and find themselves at once in attendance upon lectures, not one word of which can they understand. In place of taking this erroneous course, my advice to those thus situated, would be to go to London or some of the provincial towns, such as Dublin, Glasgow, Edinburgh or Norwich, and there attend the great hospitals and medical schools and the celebrated men connected with them; to take, at the same time, a French master, and when they have made such proficiency as will enable them to converse in the language and to understand what they hear, then to repair to Paris, where they will be sure to reap a most abundant harvest in every department of the profession to which they may choose to devote their attention. Above all, I would counsel them, during their

stay in London, to visit, as often as possible, the great Hunterian Museum in the College of Surgeons, Lincoln-Inn Fields, where they will find the best arranged and most extraordinary collection of preparations, human and comparative, the world contains—under the care of Professor Owen; a man, for unbounded knowledge in all that relates to anatomy, physiology, comparative anatomy and natural history, without perhaps an equal; and for high character and gentleman-like deportment universally esteemed and admired.

I cannot, my young friends, terminate this address, without again asking your kind indulgence for its many defects, and without reminding you once more that much of it was written under influences as unpropitious as can well be imagined—in a large saloon generally filled by a hundred people, where the pitching and tossing of the ship, during a gale of three days' duration, caused the inkstand to fly from the table in one direction and the manuscripts in another, or the clatter of knives and forks and plates, the squalls of children, the screams of women, the loud and boisterous discourse of men, together with the incessant popping of soda water, porter and champagne, and the everlasting consumption of mountains of fish, roast beef, welsh rabbits and fowls, in a succession of meals administered five times a day, produced a combination of excitement and distress, sufficient to addle the brains, or to make one think all Bedlam had been loosed. It may be easy to conceive Humboldt and Bonpland in a South American swamp, with their bodies and legs doubled up in an oven and their heads protruded at the door, fighting with millions upon millions of mosquitoes whilst they endeavored to make observations and take notes; or some unfortunate wight of a soldier, during the disastrous Moscow retreat, snugly ensconced, like a Cossack, in the thorax of a dead carcass of a horse, and there vainly endeavoring to write down with stumps of frozen fingers the emperor's commands; and yet all this could not very far exceed the position in which I found myself placed, until I had the good fortune, through the kindness of a distinguished literary friend on board, to obtain a state room, nearly as dark, however, as pitch, but still more comfortable and free from noise and clamor than any in the ship. I enter into these details very unwillingly and purely for my own justification, feeling, as I very sincerely cannot help doing, an apology to be due; and hoping that the next lecture, in which I propose to lay before you an account of the medical men and institutions of Belgium and Germany, may prove, in every respect, more valuable and worthy of your notice.